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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,446	12/05/2003	Jose M. Sosa	API-1028US (COS-936)	1024
25264	7590	04/11/2005	EXAMINER	
FINA TECHNOLOGY INC PO BOX 674412 HOUSTON, TX 77267-4412			ASINOVSKY, OLGA	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,446

Applicant(s)

SOSA ET AL.

Examiner

Olga Asinovsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/04/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

There is no amendment to the claims or the specification.

All claims are originally filed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-5, 8 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sosa et al U.S. Patent 6,437,043.

3. The rejection is set forth at pages 2-4 of the office action mailed on 12/08/2004 and it is incorporated here by reference.

4. Applicant's arguments filed 03/04/2005 have been fully considered but they are not persuasive. The argument is that reference does not disclose styrene-conjugated diene-styrene block copolymer producing an impact modified polystyrene having a haze value of less than or equal to 12 percent. In other words, the block copolymer in the present claims is different from the block copolymer in reference's invention.

5. During the interview on 01/12/2005 the inventor Dr. Sosa discloses the SBS block copolymer in the present claims having different structure that in the reference Patent 6,437,043 column 4, line 31. The difference is that the styrene block from the

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end in each terminal block in the triblock copolymer has different number of the styrene units. Patent discloses a random SB rubber represented by the structure at column 4, line 31, whereas the SBS block copolymer in present invention has a structure such as /S...S/B....B/S.....S/ .

6. The present claims are open to any structure, any random SB rubber, any numbers of styrene unit sequences.

7. Sosa discloses a transparent rubber-modified impact-resistant polystyrene. The elastomer concentration can be from 30% to 50%, column 5, lines 61-63. Thus, the styrene content in HIPS is at least 50%. The HIPS is transparent, thus, a haze value of less than or equal to 12% is inherent in Patent'043 because reference discloses transparent impact-resistant polystyrene, column 3, lines 20-21. There is no evidence in the Patent 6,437,043 that HIPS cannot has a haze value of less than or equal to 12%.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6-7, 9-17 and 19-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sosa et al U.S. Patent 6,437,043 as applied to claims 1-5, 8 and 18 above, and further in view of Bowen U.S. patent 5,633,318.

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Sosa does not disclose a coupling agent for making a SBS block copolymer, chain transfer agent and a process condition wherein the reaction can be initiated thermally.

In Bowen invention the polymerization of styrene monomer is initiated thermally, column 3, line 65, or, if needed, an initiator can be used, column 4, lines 30-34. A chain transfer agent=mercaptan can be present, column 3, lines 65-67 and column 4, lines 1-2. Any morphology of block copolymer is readable in Sosa or Bowen. The transparency is depending on the content of styrene monomer.

It would have been obvious to one of ordinary skill in the art to modify a process for producing a polystyrene resin in Sosa's invention by adding a chain transfer agent as disclosed by Bowen, and it would be obvious to regulate a molecular weight of each block for obtaining the desired characteristics of the resulting resin. Also, it would have been obvious to one of ordinary skill in the art to use a coupling agent for making a coupled block copolymer in any recited reference for producing a rubber modified impact polystyrene in Sosa and Bowen since any morphology of block copolymer is readable in Sosa or Bowen, and the morphology of block copolymer would not effect on the transparency of the obtained impact modified polystyrene. The transparency is depending on the content of styrene monomer, and Sosa discloses transparent rubber-modified impact-resistant polystyrene.

Reference to Lanza'4,939,208 has been considered.

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10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OA

04/04/2005

Olga Asinovsky
Examiner
Art Unit 1711


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700